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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/646,139 | 09/13/2000 | Tatsuaki Ishida | 10873.384USW | 2382 |

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Merchant & Gould
PO Box 2903
Minneapolis, MN 55402-0903

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| EXAMINER |
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RICKMAN, HOLLY C

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| ART UNIT | PAPER NUMBER |
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1773

DATE MAILED: 09/11/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/646,139 | ISHIDA ET AL. | |
| | Examiner | Art Unit | |
| | Holly Rickman | 1773 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 13 June 2002.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 4-7,10-12 and 15-21 is/are pending in the application.
- 4a) Of the above claim(s) 19 and 20 is/are withdrawn from consideration.
- 5) Claim(s) 10,11 and 21 is/are allowed.
- 6) Claim(s) 4-7,15,17 and 18 is/are rejected.
- 7) Claim(s) 12,16 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8.
- 4) Interview Summary (PTO-413) Paper No(s). _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Election/Restrictions

1. Newly submitted claims 19-20 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: claims 19-20 are directed to a method of using a master information carrier according to claims 15 and 16, respectively. The master information carrier set forth in claims 15 and 16 can be used in a materially different process than that set forth in claims 19-20. For example, the information carrier can be used to manufacture magnetic recording media without the use of a magnetic field by a thermal contact duplication process.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 19-20 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Objections

2. The objection to claims 2-3 and 9 has been rendered moot by the cancellation of those claims. The objection to claims 4-7 and 10-12 is withdrawn in view of Applicant's amendments.
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3. Claims 7, 12 and 15-16 are objected to because of the following informalities: claims 7 and 12 include the phrase "as a main component" which implies that there may be more than one "main" component. "Main" component has been interpreted in light of the specification and

the prior art to mean the component present in the largest amount. Thus, it is suggested that Applicant replace “a” with “the” to make it clear that there is only one “main” component. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The rejection of claims 6-7 and 11-12 under 35 U.S.C. 112, second paragraph, is withdrawn in view of Applicant’s amendments.
5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
6. Claims 4-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 is indefinite because claim 15, from which 4 depends, limits the non-magnetic material to a material selected from the group *consisting* of SiO₂, Al₂O₃, Cu, Ag and an alloy comprising Cu or Ag as a main component. Thus, the group is closed to unrecited elements such as polymers. For purposes of examining claims 4-5, it has been assumed that the Markush group set forth in claim 15 includes polymers.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

8. The rejection of claims 2-3, 9, and 13-14 under 35 U.S.C. 102(b) as being anticipated by JP 62-124622, as set forth in paper no.5, paragraph no. 5, is withdrawn in view of the cancellation of claims 2-3, 9 and 13-14 .

9. The rejection of claims 13 and 4 under 35 U.S.C. 102(b) as being anticipated by JP 55-70935, as set forth in paper no. 5, paragraph no. 6, is withdrawn in view of the cancellation of claim 13 and the amendment of claim 4 to depend from a newly added claim.

10. Claims 4, 6, 15 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Ichihara et al. (US 6014296).

Ichihara et al. disclose a magnetic recording medium having a substrate coated with a patterned ferromagnetic layer formed from a Fe or Co alloy wherein the gaps between the ferromagnetic regions of the pattern are filled with a non-magnetic material such as silica or a

polymer (Fig. 6; col. 5, lines 7-29; col. 6, lines 32-39). A protective layer is then formed on the patterned layer (col. 7, lines 25-26). The protective film is preferably about 10 nm thick (col. 18, lines 35-37).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The rejection of claims 5-7 under 35 U.S.C. 103(a) as being unpatentable over JP 55-70935 in view of JP 61-190719 is withdrawn in view of Applicant's amendments.

13. The rejection of claims 11-12 under 35 U.S.C. 103(a) as being unpatentable over JP 62-124622 in view of JP 61-190719 is withdrawn in view of the amendments to the claims.

14. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ichihara et al. (US 6014296) in view of Bar-Gadda (US 6309802).

Ichihara et al. disclose a magnetic recording medium having a substrate coated with a patterned ferromagnetic layer formed from a Fe or Co alloy wherein the gaps between the ferromagnetic regions of the pattern are filled with a non-magnetic material such as silica or a polymer (Fig. 6; col. 5, lines 7-29; col. 6, lines 32-39). A protective layer of SiO₂ is then formed

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on the patterned layer (col. 7, lines 25-26; col. 18, lines 34-37). Ichihara et al. is silent with respect to the use of a carbon protective layer.

Bar-Gadda teaches the use of a SiO₂ or carbon protective layer on a patterned magnetic recording medium (col. 5, lines 60-67).

It would have been obvious to one of ordinary skill in the art at the time of invention to substitute a carbon protective layer for the silica protective layer taught by Ichihara et al. since Bar-Gadda teaches that the two materials are art recognized equivalents.

15. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ichihara et al. (US 6014296) in view of Aine (Re. 32,464).

Ichihara et al. disclose a magnetic recording medium having a substrate coated with a patterned ferromagnetic layer formed from a Fe or Co alloy wherein the gaps between the ferromagnetic regions of the pattern are filled with a non-magnetic material such as silica or a polymer (Fig. 6; col. 5, lines 7-29; col. 6, lines 32-39). A protective layer is then formed on the patterned layer (col. 7, lines 25-26). Ichihara et al. is silent with respect to the use of an electrically conductive protective layer.

Aine teaches that it is known in the art to use an electrically conductive protective layer on magnetic recording media in order to prevent the build up of static electricity (col. 2, lines 2-4).

It would have been obvious to one of ordinary skill in the art at the time of invention to use an electrically conductive protective layer on the magnetic recording medium taught by Ichihara et al. in order prevent the build up of static electricity as suggested by Aine.

Allowable Subject Matter

16. Claim 5 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

17. Claim 5 is allowable over the closest prior art to JP 55-070935 and Ichihara et al. (US 6014296). JP 55-070935 and Ichihara et al. fail to teach or suggest the use of polyimide as the non-magnetic material separating the ferromagnetic regions disposed on the substrate layer taught in each reference. Ichihara et al. instead teaches the use of a CF polymeric compound (col. 5, lines 25-29) and JP 55-070935 teaches the use of PMMA. The prior art fails to suggest a motivation to substitute polyimide for either of these materials. It is noted that claim 5 was rejected under 35 USC 103 in paper no. 5 as being unpatentable over JP 55-70935. However, JP 55-070935 does not teach a structure wherein polyimide fills in the voids between adjacent ferromagnetic portions. The reference merely teaches using polyimide as a transfer material in forming the finished magnetic recording medium.

Claims 10-12, 16, and 21 are allowable over the closest prior art to JP 62-124622. JP 62-124622 fails to teach or suggest a ferromagnetic film having an embossed substrate with recessed portions filled with Co, Fe or an alloy containing Co or Fe as a main component. Instead, JP 62-124622 teaches the use of barium ferrite. The prior art fails to teach or suggest a motivation to substitute one of the claimed materials for barium ferrite.

Response to Arguments

18. Applicant's arguments filed 6/13/02 have been fully considered but are moot in view of the new grounds of rejection. Applicant's argument with respect to the distinction between a "master information carrier" and a "magnetic recording medium" is not persuasive for the following reasons.

Applicant argues that the claimed "master information carrier" is different in purpose, configuration and technical affect from the "magnetic recording medium" taught in the prior art (newly cited Ichihara et al. is directed to a magnetic recording medium).

It is the Examiner's contention that the preamble limitation directed to a "master information carrier" does not breath any additional life or meaning into the claims. It is, in effect, a statement of intended use. Thus, this limitation has been considered in-so-far-as the prior art structure taught by Ishihara et al. is capable of functioning in the claimed capacity. The structure taught by Ichihara et al. has the same structure, formed from the same materials as claimed by Applicant. As such, one of ordinary skill in the art would expect that this structure would be capable of functioning as a master information carrier.

Applicant further argues that the master information carrier set forth in claims 15 and 16 originally includes information signals and these signals are ultimately transformed to magnetic signals that are then stored on a recording medium. Applicant makes a distinction between the claimed "information signals" and the magnetically recorded information present on a magnetic recording medium. It is the Examiner's contention that the term "information signals" is a generic term that encompasses magnetically recording information.

Applicant also appears to make a distinction between originally recorded information and information that is subsequently recorded, as in the case of magnetic recording media. However, the claims do not limit the particular time the information signals are recorded and therefore, this is a moot point.

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Rickman whose telephone number is (703) 305-2642. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau can be reached on (703) 308-2367. The fax phone numbers for the

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organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Holly Rickman
Patent Examiner
Art Unit 1773

hcr
September 9, 2002